

19  
CLAIMS

1. Expandable intragastric balloon designed to be implanted inside the stomach of a patient for the treatment of obesity, and comprising:

- a first pouch (2) that is sufficiently flexible to pass from a reduced-volume configuration to an expanded configuration, and provided with at least one port (3),
- a second pouch (20) arranged so as to contain the first pouch (2), and provided with at least one hole (21),
- a sealing member (4) fastened onto the second pouch (20) in a leak-proof manner, and designed to seal said port (3) and said hole (21),

characterized in that the first and the second pouches (2, 20) are made of different, non-compatible materials and are assembled together with the aid of a fastening element (7) designed to ensure the leak-proof fastening of the sealing member (4) onto the first pouch (2), inside a passage (6) defined by a neck (5) extending from the port (3), by exerting a sufficient amount of pressure on said neck (5) in order to pinch it between the sealing member (4) and the fastening element (7).

2. Intragastric balloon of claim 1, characterized in that the sealing member (4) and the second pouch (20) are made of compatible materials, and in that the sealing member (4) is fastened onto the second pouch (20) by welding or gluing.

3. Intragastric balloon as claimed in claim 1 or 2, characterized in that the sealing member 4 comprises a flange (4B) enabling it to be fastened onto the periphery of the hole (21) in a leak-proof manner, e.g., by gluing or welding the flange (4B) together with the periphery of the hole (21).

4. Intragastric balloon as claimed in claim 1, 2 or 3, characterized in that the sealing member (4) comprises a septum (4A) arranged inside the passage (6) substantially opposite the fastening element (7).

5. Intragastric balloon as claimed in one of claims 1 to 4, characterized in that the fastening element (7) is designed to sufficiently compress the septum (4A) in order to ensure the leak tightness thereof, with respect to the fluids likely to be contained inside the first pouch (2).

6. Intragastric balloon as claimed on one of the preceding claims, characterized in that the neck (5) extends from the port (3) towards the interior of the first pouch (2).

7. Intragastric balloon as claimed in one of the preceding claims, characterized in that the neck (5) comprising an internal wall (5I) defining said passage (6), the fastening element (7) is arranged so as to surround the neck (5) and to exert pressure on the circumference thereof, such that the internal wall (5I) of the neck (5) conforms in shape substantially to the sealing member (4), in a leak-proof manner.

8. Intragastric balloon as claimed in one of claims 1 to 7, characterized in that the fastening element (7) consists of a ring (8).

9. Intragastric balloon as claimed in one of claims 1 to 8, characterized in that the first pouch (2) is made of polyurethane, the second pouch (20) being made of silicone.

10. Intragastric balloon as claimed in one of the preceding claims, characterized in that the sealing member (4) consists of a silicone valve.

5 11. Intragastric balloon as claimed in one of claims 1 to 10, characterized in that it comprises a ballasting means (30) designed to substantially weigh down the balloon.

10 12. Intragastric balloon of claim 11, characterized in that the ballasting means (30) consist of a plurality of solid and dense bodies (31) joined together by thread portions (32).

15 13. Intragastric balloon of claim 12, characterized in that the ballasting means (30) comprise spacers (33) arranged between two consecutive bodies (31) so as to prevent shocks.

20 14. Intragastric balloon as claimed in one of claims 10 to 13, characterized in that the ballasting means (30) is supported by the fastening element (7).

25 15. Intragastric balloon as claimed in claims 12 and 14, characterized in that one of the ends of the thread joining together the bodies (31) is firmly attached to the fastening element (7).

16. Intragastric balloon as claimed in one of claims 11 to 15, characterized in that the ballasting means (30) is arranged inside the first pouch (2).

17. Method of manufacturing an expandable intragastric balloon (1) designed to be implanted inside the stomach of a patient for the treatment of obesity, wherein provisions are made for:

- a step for manufacturing at least one first pouch (2) that is sufficiently flexible to pass from a reduced-volume configuration to an expanded configuration, and that is provided with at least one port (3),
- a step for assembling the first pouch (2) together with a second pouch (20), provided with at least one hole (21), with the result being that the first pouch (2) is contained inside the second pouch (20),
- a step for manufacturing a sealing member (4) designed to seal said port (3) and said hole (21),
- a step for fastening the sealing member (4) onto the second pouch (20) in a substantially leak-proof manner, characterized in that, in order to assemble the first and the second pouch (2, 20), the method comprises:
  - a step for mounting the sealing member (4) inside a passage (6) defined by a neck (5), extending from the port (3) of the first pouch (2),
  - a step for fastening the sealing member (4) onto the first pouch (2) with the aid of a suitable fastening element (7), by pinching said neck (5) between the sealing member (4) and the fastening element (7).

18. Method of claim 17, characterized in that the step for fastening the sealing member (4) onto the second pouch (20) is carried out by welding or gluing.

19. Method as claimed in claim 17 or 18, characterized in that the sealing member (4) comprises a flange (4B) and in that the method comprises a sub-step wherein said flange (4B) is welded or glued together with the periphery of the hole (21).

5

20. Method as claimed in one of claims 17 to 19, characterized in that it comprises a step (b) for turning over the neck (5) such that it is situated inside the first pouch (2).